**** Sebago Region Fisheries Newsletter****

Prepared by:

Francis Brautigam
James Pellerin
Brian Lewis

DEPARTMENT OF INLAND FISHERIES AND WILDLIFE
358 SHAKER ROAD GRAY, MAINE 04039
PHONE: (207) 657-2345

22nd Edition **May 3, 2007**

Current and past editions of our newsletter, as well as pictures of fish caught in the region may be viewed on the Department's home page (www.MEFISHWILDLIFE.com)

Feature Article - Rainbow Trout/Brook Trout Study Results….

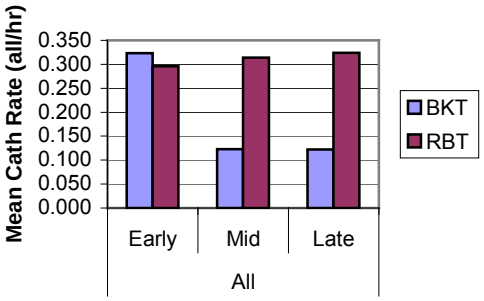
In the fall of 1997, the Fishery Division established a committee comprised of biologists and hatchery staff to revisit the prospect of a rainbow trout stocking program. After deliberation of the pros and cons, the committee concluded to move forward with a limited, experimental program to evaluate the relative performance of rainbow trout, brown trout, and brook trout. While some people contend rainbows would provide angling diversity, our intentions were to determine if rainbows could provide fishery managers with an additional tool to improve fishing opportunities for Maine anglers. The study was conducted over a 5-6 year period in a variety of Maine waters and included three parts: (1) hatchery performance comparisons among all three species, (2) field performance comparisons of browns and rainbows, and (3) field performance comparisons of brookies and rainbows. A federal hatchery in Tennessee provided Eagle Lake Strain rainbow eggs used during the study.

The study is finally winding down, a draft report for part one and two has been completed. The results of the brown trout/rainbow trout field comparison were highlighted in last winter's newsletter. A draft report for the brook trout/rainbow trout comparisons is currently being reviewed, and a final report is expected to be out by this summer. Highlights from the 3rd and final report are presented in the remainder of this article.

This portion of the study evaluated the relative field performance of Eagle Lake strain rainbow trout and Maine Hatchery strain brook trout in four small, trout ponds including: Jaybird P (Hiram), Lily P (New Gloucester), Long P (Denmark) and Overset P (Greenwood). Study objectives were: (1) to compare angler catch/harvest rates and examine whether the two trout species differ in their seasonal availability to the angler; (2) to evaluate relative size quality and growth, (3) to assess survival and carry-over potential; (4) to compare their utilization of the food chain, and (5) to examine trout performance in waters with marginal summer water quality under different levels of competition/predation.

Catch and Harvest Rates…Across all waters, legal-sized rainbow trout were caught and harvested at rates 2.5 and 3.8 times greater than brook trout, respectively. These results are not all that surprising, rainbows were slightly larger than the brookies, and had a higher proportion of rainbows were of legal-size rainbows at the time of stocking. A comparison of the combined catch of all legal and sublegal fish (all trout/hour) allows for a more standardized comparison, and addresses the size differential issue. Catch rates (all trout/hr) for individual study waters were higher for rainbow trout on three out of the four waters; however, the overall difference across all four waters was relatively small (1.2 times higher). The data suggest that full season catch rates are fairly similar between the two species.

Figure 1. Catch Rate by Season and Species.



On the other hand, a review of catch rates by early, mid, and late season shows that brook trout typically provided slightly better early season angling opportunities, whereas rainbow trout yielded about 2 ½ times higher catch rates during mid and late season periods (Figure 1).

Size Quality and Growth…Brook trout produced fisheries of lower size quality than rainbow trout. Brook trout averaged 11.2 inches long and weighed 0.62 pounds, where as rainbows averaged 14.6 inches long and weighed 1.1 pounds across all study waters. This data demonstrates that rainbow trout typically provided better fisheries in terms of size quality. However, the above data does not clarify whether or not the longer lengths and higher weights for

rainbow trout are due to better growth, because the mean size differences may simply be a function of the rainbows being stocked at slightly larger sizes and demonstrating better survival.

To answer this question, the increase in growth since stocking (incremental growth) was examined, eliminating the initial size advantage at time of stocking. In addition, incremental growth data was further broken down by month to develop a monthly growth rate. The use of monthly growth rates allows fish that were sampled at different times during the study to be compared. Rainbow trout exhibited better monthly growth rates than brook trout, both in terms of length and weight. Monthly growth for rainbows was approximately 50% greater than for brook trout for both length and weight.


Size Comparison of Age II+ Brook and Rainbow Trout

Holdover and Survival…Rainbow trout survival (holdover potential) exceeded brook trout on three out of the four study ponds. The annual survival estimate for rainbow trout was 2.7 times greater than brook trout (14 and 38%). Across all waters, brook trout older than I+ comprised only 10.0% of our sample compared to 55.1% for rainbow trout. These results indicate rainbow trout are more likely to provide quality and trophy sized trout fishing opportunities than brook trout.

Diets…Fall diets of brook trout and rainbow trout were very similar, and surprisingly Eagle Lake strain rainbow trout did not appear to utilize larger, non-insect type food items (i.e. fish, mollusks, crayfish) anymore than brook trout. On the other hand, rainbow trout exhibited fewer empty stomachs and a higher volume of food/kilogram of trout. This may suggest that rainbow trout are more aggressive feeders, which could account for the higher growth rate observations.

Water Quality and Competition…Although our sample size was limited to only four ponds, collected survival and growth information suggests rainbow trout were more tolerant of competition and/or predation pressures than brook trout. For example, Lily Pond produced good numbers of holdover rainbow trout in the 14-18 inch range, despite heavy competition from largemouth bass, chain pickerel, black crappie, pumpkinseed sunfish, and several other fish species. On the other hand, we observed only a total of three brook trout during the four sampling events conducted between 2001 and 2006. Interestingly, rainbows demonstrated poorer survival to older ages in two ponds with limited water quality (Long and Jaybird Ponds), despite lower level levels of competition than Lily P. This suggests poor to marginal summer water quality conditions may be more limiting to rainbow trout performance than heavy competition.


Trophy 20-inch Overset P Rainbow

In conclusion, our initial and most important reason for investigating rainbow trout performance was to explore their potential for improving angling opportunities for coldwater fish, particularly in marginal trout ponds with “put-and-take” stocking programs. Performance results from this study indicate rainbow trout have the potential to produce longer seasonal fishing opportunities, better size quality fisheries, and a limited number of trophy-sized (≥ 18 inches) trout without sacrificing overall catch rates. However, as a trout, they still have their limitations and will only produce longer season “put-and-take” fisheries of slightly larger size quality in waters with extremely marginal water quality. In such cases, a brook trout stocking program may yield the same returns, except over a shorter period of time. On certain marginal waters currently managed for brook trout, the replacement of “put-and-take” brook trout stocking programs with rainbow trout could improve angling opportunities for coldwater sportfish in Maine.

Before the Department adopts a rainbow trout stocking program, all of the associated hatchery and management implications of such a program need to be considered. For example, if a brood stock were developed, additional equipment would be required to manipulate rainbow trout spawning times if a fall spawning strain is preferred. Fishery managers may need to protect spring spawning rainbow trout due to their vulnerability to anglers and poachers. If rainbow trout do not replace existing programs, then the largest obstacle to overcome will probably be associated with space constraints in our existing hatchery system.

Perhaps, the most important consideration in initiating a rainbow trout stocking program is their potential to negatively impact native salmonids like brook trout and landlocked salmon. While I agree with Scott and Crossman’s statement in Fishes of Canada, “The rainbow has been one of the more successful, more appreciated, and less potentially dangerous of the many attempts to introduce a fish to areas beyond its natural range;” it would be irresponsible of the Department to not seriously consider the risks associated with the introduction of a non-native trout species into Maine waters. An important component of this risk assessment is the development of a sound rainbow trout stocking policy to provide assurances that important native fisheries will not be jeopardized by rainbow introductions. In addition, existing Department policies require all new stockings receive Division-wide peer review. This formal process ensures that new stocking proposals are justified. Additionally, existing policies also have an outreach component, which includes a requirement that public input be sought in response to proposed new stockings. Typical venues for this input

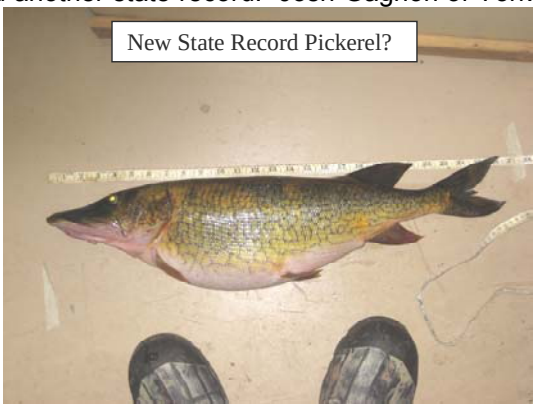
include this newsletter, weekly fishing reports posted on the Department's web site and in some local newspapers, sportsmen's forums, and appearances at fish and game clubs and other groups.

New Youth Fishing Initiative at Alden's Pond

Working in partnership with the Town of Gorham, the landowner, and the University of Maine, the Department is in the process of advancing fishing regulations to create a new youth-only fishing opportunity on Alden's Pond in Gorham. Under this program, the pond would be open to fishing for youth under the age of 16 with a 2 trout daily bag limit. As proposed, the ½ acre pond would be stocked at least twice each spring to provide a seasonal trout fishery in this urban setting. Limited adjacent parking has been designated on the USM campus in support of this youth fishing initiative. The proposed fishing regulations and stocking program should be established in the spring of 2008, although the pond may be stocked as early as 2007 depending on the availability of unscheduled brook trout.

Another State Fishing Record Landed in Southern Maine

At the onset of the 2007 ice fishing season, 8 of the 19 existing state record freshwater fish were caught in the Sebago Lakes Region including: a brown trout over 23 lbs, a 22.5 lb landlocked salmon, an 11.6 lb largemouth bass, an 8 lb smallmouth, a 7.5 lb lake whitefish, a 2.8 lb white perch, a 1.6 lb yellow perch, and a 6.2 lb rainbow trout. The region recently claimed another state record! Josh Gagnon of York County landed a 7.0 lb chain pickerel that beat the old record from Androscoggin Lake by just over 3 ounces. This latest record was caught in Balch Pond, located along the Maine New Hampshire border in Newfield. This new record is uncharacteristically plump for its length (Photo), and appears to have recently consumed a large meal of fish!



Catchable Trout Study Recent hatchery upgrades and renovations made possible by a 7 million dollar bond referendum have enabled the Department's hatchery system to increase production of catchable size brook trout. In fact, last fall 5,000 additional fall yearling brook trout (12–14 inches long) were stocked in southern Maine waters. These fall-stocked brookies are really expected to spice up winter angling opportunities. Stocking increases will continue to gradually expand both in the spring and fall. In anticipation of this program expansion the Department will be collecting angling information on select catchable trout fisheries over the next 3 years, during the spring and winter fishing seasons. The collected information will help guide future decision-making in the development of stocking rates and water selection, so as to maximize angler returns of stocked trout on waters managed for catchable trout.

Sea-Run Brown Trout Project Since 1963; the Department has stocked brown trout in southern Maine tidal rivers to create "sea-run" fisheries, where stocked trout would grow out in the productive estuarine environment and return as "wall hanger" size fish. The stocking program has evolved over the years, with more recent focus on stocking larger size browns in the fall that are better able to escape predation and offer immediate expanded fishing opportunities for legal size fish during the fall/winter/spring period. There are few places in Maine where harsh winter temperatures and ice formation don't preclude opportunities to provide open water fishing in a stream-like setting.

Anecdotal reports indicate the fishery is being well used and is growing in popularity. Although many different rivers have been experimentally stocked over the years, there are currently three southern Maine rivers that are stocked annually and managed as tidewater fisheries, including the Mousam, Ogunquit, and Salmon Falls rivers. All three of these rivers are stocked below dams and/or natural obstructions at the confluence of the freshwater and marine environment. The current annual southern Maine tidewater stocking program equates to about 3,200 fall yearling brown trout.

The management goals developed for this program under the statewide plan for brown trout are to provide experienced anglers with a catch of one legal fish per day averaging 12 to 16 inches long, with an occasional fish between 18 and 20 inches. Although anecdotal reports suggest daily catch rates are typically much better than the established management goals there is virtually no tangible data to verify angler reports of excellent catch rates and occasional catches of fish exceeding 20 inches. It is the lack of information regarding existing fisheries and increasing inquiries from the public for expanded tidewater fishing opportunities that prompted a recent meeting organized by Region A Biologist Jim Pellerin, and included representatives from trout unlimited, and local tackle shops. The meeting was an effort to work with volunteers to collect information needed to document the success and effectiveness of these tidewater stocking programs, before additional program expansions or program

modifications are considered. As a result of the meeting the following action items will be undertaken and managed by project participants:

- installation and maintenance of angler survey stations, where anglers can fill out cards on their fishing trip and report angler use information;
- outfitters and "tackle shop" owners will encourage guides and anglers to maintain the Department's personal fishing log books or record this information in the electronic version called TripTracks;
- and volunteers will conduct angler use counts.

Data will be collected for a period of three years, and then analyzed to evaluate these stocking programs. The data will also be used to guide future expansions and modifications of similar stocking programs.

Public Access

Regionally speaking, there are several projects at various stages of completion, but no new facilities were developed this past year in Southern Maine. The absence of staff exclusively dedicated to public access acquisition and development will continue to limit the rate at which new water access facilities can be developed. Given our staff and financial limitations, we have increasingly focused on private landowners, who provide the vast majority of access to our public waterways. In previous newsletters, we talked about a new regional access sign developed for private, traditional access sites (December 2005). This effort is intended to cultivate a working relationship with private landowners and work towards keeping these critical access opportunities open to public use. So far we have contacted 20 landowners with excellent success. All but 2 have given us permission to post the new signage and plan to continue allowing recreational access to public waters across their private lands. Of the two that weren't interested, both landowners still intend to allow access. Several of the landowners were very enthusiastic about the signs and expressed their gratitude for the effort. Based on our current results, we will continue to work on this landowner relations program.

Sebago Lake Update

A complete summary of the 2006 open water angler survey was reported in the last edition of our newsletter and overall positive changes in the salmon and togue fishery remain very encouraging. Even long time marina operator Charlie Feschette, indicated 2006 was one of the best salmon years he has experienced on Sebago Lake. In fact, angler use increased by 37% since 2002 in response to gains in the quality of Sebago's fisheries. Given the progress realized in the recovery of this significant sport fishery and the recent designation of Sebago as a "Classic Salmon" initiative water, the time is ripe to develop a long-term management plan for the lake. We are committed to the development of a plan that is embraced by the angling community, recognizing full well the challenge of balancing the broad range of angling interests, opinions, and expectations on this very popular and unique water body. We have developed a draft management plan, and we have offered to work collaboratively with the Sebago Lake Anglers Association (SLAA) in the development of the final plan. Don Allen, SLAA president, expressed a willingness and desire to assist the Department in developing such a plan. Other organizations and key individuals, including Trout Unlimited, and Larry Fiorie (SAM's Classic Salmon Project Coordinator) will also be invited to participate in the process. Since SLAA supports a membership with a broad range of fisheries management concerns and its membership actively fishes Sebago, this group will offer a good cross section of the angling public and a broad range of opinions. In the future, we expect to solicit additional public comments on the final draft management plan to insure all the important and critical items have been explored and considered.

Open Water Work Plans

A few highlights of the upcoming field season in the Sebago Lake's Region are provided below:

- Boat electrofishing bass surveys at Thompson L (Poland), Thomas P (Casco), Worthley P (Poland), Otter Ponds 2 & 4 (Standish), and Horn P (Limington). This sampling will provide data required under the Department's statewide bass management plan and provide additional information regarding the potential risk of bass predation on stocked brook trout.
- Development of a fisheries management plan for Sebago Lake, as a component of the Classic Salmon designation.
- Spring trap netting at Chapman (Hiram) and Clay's (Fryeburg) Ponds to assess brook trout survival and growth.
- Participate in the Department's Catchable Trout Study. Anglers on the Hinkley ponds (S Portland), Round P (Lyman), and Wilcox P (Biddeford) will surveyed during the spring. These waters are stocked with legal size trout to provide "put and take" spring fisheries. Information collected on these waters and others in central Maine over the next three years will be used to guide future stocking decisions associated with ramped up hatchery production.
- A seasonal clerk (John Swetsloot) has been hired to conduct a season-long angler survey on Auburn Lake (Auburn), which is one of the region's premier salmon and togue fisheries. Collected information will guide future management.
- Reclaim Big Speck P (Norway) to create a quality brook trout fishery.
- Install special signage at privately owned water access sites to improve landowner relations.
- Continue ongoing sampling efforts to assess brown trout size quality and survival on all lakes and ponds in southern Maine, in support of the Department's statewide brown trout management plan.

Region A's Noteworthy Fish List

Below is a list of just a few trophy fish caught in Region A waters during the past winter fishing season.

Angler's Name	Weight and Fish	Location
Spencer Smith	5 lb largemouth bass	Sebago L
Tim Heath	12.9 lb lake trout	Sebago L
Robert Turcotte	11.3 lb lake trout	Sebago L
Josh Gagnon	7.0 chain pickerel	Balch L
Daniel Smith	6.8 lb brown trout	Little Sebago L
Marc Berube	6.1 lb brown trout	Middle Range P